Name: Rachel Fischhoff Grade: 5 Date: March 30, 2012

Protractor Practice

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| Lesson Sources: Margot |
| Lesson Objectives: Students will become comfortable with protractors by practicing applying their knowledge of angles. |
| Standards: CC 4G5.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse),and perpendicular and parallel lines. Identify these in two-dimensional figures. |
| Multicultural Content: |
| Materials and Advanced Preparation: Protractors, packets |
| Prior Knowledge and Skills Needed: knowledge of protractors, angles, etc. |
| Key/New Vocabulary: Angle, ray, endpoint, vertext, protractor |

Lesson Procedure: Part One

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| **Time** | **Teacher Actions** | **Student Learning Activities** | **Form of Assessment** |
| 1 min | **1. Connection**   * Mathematicians, this week you have really applied yourselves to the study of geometry. You have learned so much about geometric elements, angles, and using protractors. * Today you are going to become even more skilled in the use of the protractor by measuring and drawing angles. | Explain purpose of mini-lesson | Active listening |
| 10 min max | **2. The Teaching (The Giving of Information):**   * Watch while I measure one of the angles on this page. * First I need to choose my angle. I’ll mark it like this. * Hmmm, does this seem acute or obtuse? * Now I’m ready to place my zero line along one side of this angle. * Next, I move my centerpoint to the vertext. * Ok. Now I’m ready to follow my protractor from *this* side to *this* side. * Now, I’m seeing two numbers. Based on my expectations, I know that I’ll be looking at the number that is *less than ninety degrees*. * What did you notice about how I did that? Can you help me do it again by telling me back the steps that I used? | * Active listening * Noticings * Guiding me through a re-do | * Active listening * Some noticings and directions |
|  | **3. Have-A-Go (optional)**   * Now it’s your turn. Choose an angle on your own sheet and measure it using the same steps. | How will students be actively involved?  By:   * Practicing the mini-lesson | * Check as students work |
| **Anticipated Responses/Outcomes:**   * Range of comfort w/protractor * Range of comfort choosing correct scale (Inside? Outside?) | | | |
|  | **4. The Link**   * Today you will apply your knowledge of angles and your protractor skills by measuring the angles in this packet. * (Not just angles, angles that are parts of shapes) * This means working independently, working quietly, and working efficiently. | **(Workshop Time)**   * Students will apply the strategy practiced on the rug. | * Check in with students * Some conferences |
|  | **5. Closing (at the share)**   * Exemplar measuring * Exemplar drawing * Bridge to polygons | * “Curated” share of exemplars | * Look at examples * Bridge to next week |
| **Anticipated Responses/Outcomes:**   * Efficiency? * Comfort? | | | |

**Reflections:**

How did the lesson plan work? What was effective? What did you learn? What would you change for tomorrow or the next time you will use this plan?